

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1           1. (Currently amended) A method for creating a mask-programmable  
2 module from standard cells, comprising:  
3           specifying characteristics of an end design;  
4           selecting a plurality of standard cells from a standard cell library based on  
5 the characteristics of the end design;  
6           combining the plurality of standard cells into a mask-programmable  
7 module, wherein instances of the mask-programmable module are repeated to  
8 form a mask-programmable fabric; and  
9           designing a mask-programmable interconnect to match the mask-  
10 programmable module, whereby connections within the mask-programmable  
11 module and between mask-programmable modules ~~are can be~~ generated by  
12 programming the mask-programmable interconnect.

1           2. (Currently amended) The method of claim 1, wherein the mask-  
2 programmable modules and the mask-programmable interconnect that make up  
3 the mask-programmable fabric ~~are can be~~ programmed by changing inter-metal  
4 via layers and/or metal layers.

1           3. (Original) The method of claim 1, wherein combining the plurality of  
2 standard cells into a mask-programmable module additionally involves defining  
3 connections between standards cells within the mask-programmable module.

1           4. (Currently amended) The method of claim 1, further comprising  
2 | generating views for the mask-programmable module, wherein the views ~~can~~  
3 include:  
4           a physical view that specifies connectivity within the mask-programmable  
5 module, including connectively with pins in the mask-programmable module;  
6           a logical view that specifies logical relationships between signals in the  
7 mask-programmable module; and  
8           a timing view that specifies timing relationships within the mask-  
9 programmable module.

1           5. (Original) The method of claim 4, wherein generating the views  
2 involves using pre-existing information about the plurality of the standard cells  
3 from the standard cell library to generate the views for the mask-programmable  
4 module.

1           6. (Original) The method of claim 1, further comprising:  
2           receiving a high-level design for an integrated circuit; and  
3           performing a synthesis operation on the high-level design to generate a  
4 netlist for the high-level design that contains references to mask-programmable  
5 modules.

1           7. (Original) The method of claim 6, further comprising performing a  
2 placement operation and a routing operation on the netlist to produce a layout for  
3 the integrated circuit.

1           8. (Original) The method of claim 7, wherein performing the routing  
2 operation involves programming the mask-programmable modules and mask-  
3 programmable interconnect.

1           9. (Currently amended) A computer-readable storage medium storing  
2 instructions that when executed by a computer cause the computer to perform a  
3 method for creating a mask-programmable module from standard cells, the  
4 method comprising:  
5           specifying characteristics of an end design;  
6           selecting a plurality of standard cells from a standard cell library based on  
7 the characteristics of the end design;  
8           combining the plurality of standard cells into a mask-programmable  
9 module, wherein instances of the mask-programmable module are repeated to  
10 form a mask-programmable fabric; and  
11          designing a mask-programmable interconnect to match the mask-  
12 programmable module, whereby connections within the mask-programmable  
13 module and between mask-programmable modules are ~~can be~~ generated by  
14 programming the mask-programmable interconnect.

1           10. (Currently amended) The computer-readable storage medium of claim  
2 9, wherein the mask-programmable modules and the mask-programmable  
3 interconnect that make up the mask-programmable fabric are ~~can be~~ programmed  
4 by changing inter-metal via layers and/or metal layers.

1           11. (Original) The computer-readable storage medium of claim 9, wherein  
2 combining the plurality of standard cells into a mask-programmable module  
3 additionally involves defining connections between standards cells within the  
4 mask-programmable module.

1           12. (Currently amended) The computer-readable storage medium of claim  
2 9, wherein the method further comprises ~~comprising~~ generating views for the  
3 mask-programmable module, wherein the views ~~can~~ include:

4 a physical view that specifies connectivity within the mask-programmable  
5 module, including connectivity with pins in the mask-programmable module;  
6 a logical view that specifies logical relationships between signals in the  
7 mask-programmable module; and  
8 a timing view that specifies timing relationships within the mask-  
9 programmable module.

1 13. (Original) The computer-readable storage medium of claim 12,  
2 wherein generating the views involves using pre-existing information about the  
3 plurality of the standard cells from the standard cell library to generate the views  
4 for the mask-programmable module.

1 14. (Currently amended) The computer-readable storage medium of claim  
2 | 9, wherein the method further comprises ~~comprising~~:  
3 receiving a high-level design for an integrated circuit; and  
4 performing a synthesis operation on the high-level design to generate a  
5 netlist for the high-level design that contains references to mask-programmable  
6 modules.

1 15. (Currently amended) The computer-readable storage medium of claim  
2 | 14, wherein the method further comprises ~~comprising~~ performing a placement  
3 operation and a routing operation on the netlist to produce a layout for the  
4 integrated circuit.

1 16. (Original) The computer-readable storage medium of claim 15,  
2 wherein performing the routing operation involves programming the mask-  
3 programmable modules and mask-programmable interconnect.

1           17. (Currently amended) An apparatus for creating a mask-programmable  
2 module from standard cells, comprising:  
3           a specifying mechanism configured to specify characteristics of an end  
4 design;  
5           a selecting mechanism configured to select a plurality of standard cells  
6 from a standard cell library based on the characteristics of the end design;  
7           a combining mechanism configured to combine the plurality of standard  
8 cells into a mask-programmable module, wherein instances of the mask-  
9 programmable module are repeated to form a mask-programmable fabric; and  
10          a designing mechanism configured to design a mask-programmable  
11 interconnect to match the mask-programmable module, whereby connections  
12 within the mask-programmable module and between mask-programmable  
13 | modules ~~are can be~~ generated by programming the mask-programmable  
14 interconnect

1           18. (Currently amended) The apparatus of claim 17, wherein functions of  
2 the mask-programmable modules and the mask-programmable interconnect that  
3 | make up the mask-programmable fabric ~~are can be~~ programmed by changing  
4 inter-metal via layers and/or metal layers.

1           19. (Original) The apparatus of claim 17, wherein combining the plurality  
2 of standard cells into a mask-programmable module additionally involves defining  
3 connections between standards cells within the mask-programmable module.

1           20. (Currently amended) The apparatus of claim 17, further comprising a  
2 generating mechanism configured to generate views for the mask-programmable  
3 | module, wherein the views ~~can~~ include:

4           a physical view that specifies connectivity within the mask-programmable  
5 module, including connectivity with pins in the mask-programmable module;  
6           a logical view that specifies logical relationships between signals in the  
7 mask-programmable module; and  
8           a timing view that specifies timing relationships within the mask-  
9 programmable module.

1           21. (Original) The apparatus of claim 20, wherein generating the views  
2 involves using pre-existing information about the plurality of the standard cells  
3 from the standard cell library to generate the views for the mask-programmable  
4 module.

1           22. (Original) The apparatus of claim 17, further comprising:  
2           a receiving mechanism configured to receive a high-level design for an  
3 integrated circuit; and  
4           a synthesis mechanism configured to perform a synthesis operation on the  
5 high-level design to generate a netlist for the high-level design that contains  
6 references to mask-programmable modules.

1           23. (Original) The apparatus of claim 22, further comprising a place-and-  
2 route mechanism configured to perform a placement operation and a routing  
3 operation on the netlist to produce a layout for the integrated circuit.

1           24. (Original) The apparatus of claim 23, wherein performing the routing  
2 operation involves programming the mask-programmable modules and mask-  
3 programmable interconnect.